

FFID: CA921382075900
Size: 172 acres
Mission: Manufacture grenades, projectiles, and steel cartridge casings
HRS Score: 63.94; placed on NPL in February 1990
IAG Status: IAG signed in April 1990
Contaminants: Chromium, cyanide, and zinc
Media Affected: Groundwater and soil
Funding to Date: \$44.9 million
Estimated Cost to Completion (Completion Year): \$19.4 million (FY2016)
Final Remedy in Place and Response Complete Date for All Sites: FY1998
Five-Year Review Status: NA



Riverbank, California

Restoration Background

In 1942, the Army constructed what is now the Riverbank Army Ammunition Plant as an aluminum reduction plant to supply military requirements. Since 1951, the installation has manufactured steel cartridge cases for the Army and the Navy. Other manufactured products include grenades and projectiles, which the Army ships to other ammunition plants for loading operations.

In FY85, a preliminary assessment and site inspection identified the following sites: an industrial wastewater treatment plant, an abandoned landfill, and four evaporation and percolation ponds located north of the plant near the Stanislaus River. Chromium was detected in drinking water wells at residences west of the installation. As an interim action, the installation began a quarterly groundwater monitoring program. The Army provided alternative water supplies from deeper groundwater wells to five residences with contaminated wells.

In FY90, a groundwater extraction and treatment system (GWTS) was constructed. In FY92, the Army built a water distribution system for 70 nearby residences. In FY93, the regulatory agencies approved the final remedial investigation and feasibility study report, and the Army presented the proposed plan to the public for review. The plan recommended (1) expansion of the GWTS to provide complete capture of the contaminated groundwater plume and (2) placement of a final cap over the abandoned landfill.

In FY94, the installation completed a removal action at the four evaporation and percolation ponds and received approval from EPA and the state regulatory agency for the first installationwide Record of Decision. The installation also formed a technical

review committee. In FY95, the installation completed construction of the landfill cap.

In FY96, the Army constructed the off-site groundwater extraction system to minimize migration of the plume and to demonstrate capture of the plume. The installation began a maintenance program for the landfill cap.

In FY97, the installation completed expansion of the GWTS and began long-term monitoring (LTM). The Army submitted a petition to delete the installation from the National Priorities List (NPL). EPA approved the preliminary closeout report and the remedial action (RA) completion report. Riverbank became the first DoD installation on the NPL to reach the Construction Complete milestone.

In FY99, the Army added an ion exchange system to the GWTS to remove chromium and cyanide from the groundwater. This method eliminated chemical use at the interim GWTS.

FY00 Restoration Progress

The installation continued to move toward closeout of RAs. Further optimization of the GWTS with innovative technologies eliminated 50 percent of the operating cost, or \$600,000. The installation also developed and implemented a computer-based system to transfer all documents to a compact disc.

Plan of Action

- Continue to pursue elimination of the GWTS, with all discharge going to the city's publicly owned treatment works in FY01
- Continue optimization efforts to reduce operating costs of the GWTS by another 50 percent in FY01

FY01 FUNDING BY PHASE AND RELATIVE RISK

